

The BS degree in Earth and Space Exploration with a concentration in Astrobiology & Biogeosciences requires the following core courses (26 credits):

SES 121 Earth, Solar Sys & Universe I (3) and SES 123 Earth, Solar Sys & Universe Lab I (1) Select one set:	SES 130 Coding for Exploration (CS) (3) SES 311 Essentials of Astrobiology (3) GLG 321 Mineralogy (3) GLG 481 Geochemistry (3)
SES 122 Earth, Solar Sys, & Univ II (3) and SES 124 Earth, Solar Sys, & Univ Lab II (1) <u>OR</u> SES 126 Exploration of the Universe (3) and SES 128 Exploration of the Universe Lab (1)	SES 410 Senior Exploration Project I (3) SES 411 Senior Exploration Project II (3)

In addition, 6 credits of Upper-division Electives from AST/GLG/SES topics are required. Select electives from the following or substitute with advisor approval:

AST 321 Intro Planet. & Stellar Astrophysics (3) BIO 320 Fundamentals of Ecology (3) BIO 340 General Genetics (3) BIO 345 Organic Evolution (3) GLG 404 Fundamentals Planetary Geology (3) GLG 430 Paleontology (3)	GLG 435 Sedimentology (3) GLG 460 Astrobiology (3) GLG 485 Meteorites and Cosmochemistry (3) GLG 489 Field Geochemistry (L) (3) GLG 490 Remote Sensing (3) SES 350 Eng Sys & Exper Problem Solving (3)
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Required courses in other related fields include the following (33 credits):

BIO 181 General Biology I (4)  
BIO 182 General Biology II (4)  
CHM 113 General Chemistry I SQ (4)  
CHM 116 General Chemistry II SQ (4)  
MAT 265 Calculus for Engineers I (3) or MAT270 Calc with Analytic Geometry I (4)  
MAT 266 Calculus for Engineers II (3) or MAT271 Calc with Analytic Geometry II (4)  
MAT 267 Calculus for Engineers III (3) or MAT272 Calc with Analytic Geometry III (4)  
PHY 121 University Physics I: Mechanics (SQ) (3)<sup>1</sup>  
PHY 122 University Physics Laboratory I (SQ) (1)<sup>1</sup>  
PHY 131 University Physics II: Electricity and Magnetism (SQ) (3)<sup>2</sup>  
PHY 132 University Physics Laboratory II (SQ) (1)<sup>2</sup>

<sup>1</sup>Both PHY 121 and 122 must be taken to secure SQ credit.

<sup>2</sup>Both PHY 131 and 132 must be taken to secure SQ credit.

#### IMPORTANT NOTES:

- **Students must receive C's or better in all of the above courses in order for them to count toward the major.**
- **The major map for the student's catalog year represents the official catalog for the degree.**
- **Substitutions for any of the requirements above must be approved by a SESE advisor and the student must notify the advisor if substitutions or other requirements are not showing up on the DARS correctly.**